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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

22 SEP 2004



Applicant's or agent's file reference SC0983EM	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 02/12277	International filing date (day/month/year) 01.11.2002	Priority date (day/month/year) 22.03.2002
International Patent Classification (IPC) or both national classification and IPC H04L12/44		
Applicant MOTOROLA INC		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing indications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 29.09.2003	Date of completion of this report 25.06.2004
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**INTERNATIONAL PRELIMINARY
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International application No. **PCT/EP 02/2277**

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-6,9-15
	No: Claims	1,7,8
Inventive step (IS)	Yes: Claims	3-6,10-13
	No: Claims	1,2,7-9,14,15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1) Reference is made to the following document:

D1: US-A-4 701 756 (BURR WILLIAM E) 20 October 1987 (1987-10-20)

2) The present application does not meet the requirements of Article 33(1) PCT, because the subject-matter of claims 1, 7 and 8 is not new in the sense of Article 33(2) PCT.

2.1) The document D1 discloses (the references in parentheses applying to this document):

- a self-routing communication network (see figure 5), comprising
 - a plurality of nodes (see figure 5, references 6-13);
 - a plurality of star couplers each having a plurality of inputs and a plurality of outputs (see figure 5, references 1-5); and
 - communication paths coupled between the plurality of star couplers and the plurality of nodes for communication therebetween of frames of information (see figure 5),wherein
 - the communication paths include at least one alternative communication path (see column 5, lines 46-48, column 6, lines 19-23), and
 - the star couplers each include means for sensing which of its inputs first receives a frame of information and for passing only the frame of information first received (see column 8, lines 46-56) **[claim 1]**
 - that the frames of information each have a frame-start-sequence, and the star couplers further each include means for changing the frame-start-sequence before outputting the frame (see column 5, lines 64-67 and column 8, lines 51-56) **[part of claim 2]**
 - that the network is based on a deterministic media access scheme (see column 8, lines 49-50) **[claim 7]**
- The subject-matter of claims 1 and 7 is therefore not new (Article 33(1) and (2) PCT).

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2.2) Dependent **claim 8** refers to the fact that the network is arranged for real-time communication, which is also the case for the network disclosed in D1.

The subject-matter of claim 8 is therefore not new (Article 33(1) and (2) PCT).

3) **Claims 2 and 9** do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claims attempt to define the subject-matter in terms of the result to be achieved which merely amounts to a statement of the underlying problem: "such that an interconnection failure may be diagnosed by analysing the frame-start-sequence" in claim 2, and "whereby interconnection failure in the network may be diagnosed by analysing from the frame-start-sequence" in claim 9.

Moreover, the wording of said claims is so broad that it cannot be considered as involving an inventive step (Article 33(3) PCT).

The same applies to **claims 14-15** as dependent on claim 9.

4) Document D1, which is considered to represent the most relevant state of the art, discloses (cf. paragraph 2.1 in this communication) a self-routing communication network from which the subject-matter of **claim 3** differs in that the means for changing the frame-start sequence comprises means for reducing the size of the frame-start sequence by a predetermined amount.

The subject-matter of claim 3 is therefore novel (Article 33(2) PCT).

The problem to be solved by the present invention may therefore be regarded as using an extra message to signal the failure.

The solution to this problem proposed in claim 3 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: reducing the size of the frame-start sequence by a predetermined amount allows to signal a failure somewhere in the network without having to use an extra message.

The same reasoning applies to **claim 10**.

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Claims 4-6 are dependent on claim 3 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Claims 11-13 are dependent on claim 10 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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